

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION

SLINGSHOT PRINTING LLC,

Plaintiff,

v.

HP INC.,

Defendant.

C.A. No. 6:19-cv-00364

**Jury Trial Demanded**

**COMPLAINT**

Plaintiff Slingshot Printing LLC (“Slingshot” or “Plaintiff”), files this complaint for patent infringement against Defendant HP Inc. (“HP” or “Defendant”), under 35 U.S.C. § 271, as a result of HP’s unauthorized use of Slingshot’s patents, and alleges as follows:

**THE PARTIES**

1. Slingshot is a limited liability company organized and existing under the laws of Delaware, with its principal place of business at 8455 Colesville Road, Suite 830, Silver Spring, MD 20910.

2. On information and belief, HP is a Delaware corporation with a principal place of business at 1501 Page Mill Road, Palo Alto, CA 94304.

3. On information and belief, HP formally registered to do business in the state of Texas under Texas SOS file Number 0012093906 in May 1998, and, since at least

as early as 2016, HP has had an established place of business in this judicial district with a physical office at 3800 Quick Hill Rd #100, Austin, TX 78728.

### **JURISDICTION AND VENUE**

4. This is a civil action for infringement of United States Patent Nos.: 6,485,124; 6,666,449; 6,773,088; 7,311,385; 7,819,498; 7,841,712; and 8,113,618 (collectively, the “patents-in-suit” or “asserted patents”). True and correct copies of the patents are attached as Exhibits 1-7, respectively.

5. This action arises under the patent laws of the United States, 35 U.S.C. § 100 *et seq.*, generally, and 35 U.S.C. §§ 271(a), specifically.

6. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. § 1331 and 28 U.S.C. § 1338.

7. HP is subject to this Court’s specific and general personal jurisdiction, in accordance with due process and/or the Texas Long Arm Statute because, in part, HP “[r]ecruits Texas residents, directly or through an intermediary located in this state, for employment inside or outside this state.” *See* Tex. Civ. Prac. & Rem. Code § 17.042.

8. Additionally, this Court has specific personal jurisdiction over HP because it committed and continues to commit acts of infringement in this judicial district in violation of 35 U.S.C. § 271(a). In particular, HP has made, used, offered to sell, and sold products and systems in this judicial district, including infringing thermal inkjet printers and thermal inkjet print cartridges.

9. In addition, and on information and belief, HP is subject to the Court’s general jurisdiction because it regularly conducts and solicits business, or otherwise

engages in other persistent courses of conduct in this district, and/or derives substantial revenue from the sale and distribution of goods and services provided to individuals and businesses in this district.

10. In sum, this Court has specific and general personal jurisdiction over HP because, *inter alia*, HP, on information and belief: (1) has substantial, continuous, and systematic contacts with this State and this judicial district; (2) owns, manages, and operates facilities in this State and this judicial district; (3) enjoys substantial income from sales in this State and this judicial district; (4) employs Texas residents in this State and this judicial district, and (5) markets products in this State and judicial district.

11. Venue is proper pursuant to 28 U.S.C. §§ 1391 and 1400, at least because HP, either directly or through its agents, has committed acts of infringement in this district, and has a regular and established place of business in this district.

12. On information and belief, HP maintains a significant physical presence in this district that is an established place of business of Defendant. Specifically, HP has a large corporate office at 3800 Quick Hill Rd #100, Austin, TX 78728 (“Austin Office”), which is within this judicial district. Affixed to the exterior of the Austin Office is large and clear signage that reads “HP” as seen in the image below:



Source: Google Streetview of 3800 Quick Hill Road (attached as Exhibit 8)  
([https://www.google.com/maps/@30.4700385,-97.6860037,3a,75y,339.27h,89.01t/data=!3m7!1e1!3m5!1s1Y6-J\\_EubV2V98\\_XmOH\\_NA!2e0!6s%2F%2Fgeo1.ggpht.com%2Fcbk%3Fpanoid%3D1Y6-J\\_EubV2V98\\_XmOH\\_NA%26output%3Dthumbnail%26cb\\_client%3Dmaps\\_sv.tactile.gps%26thumb%3D2%26w%3D203%26h%3D100%26yaw%3D137.1953%26pitch%3D0%26thumbfov%3D100!7i16384!8i8192](https://www.google.com/maps/@30.4700385,-97.6860037,3a,75y,339.27h,89.01t/data=!3m7!1e1!3m5!1s1Y6-J_EubV2V98_XmOH_NA!2e0!6s%2F%2Fgeo1.ggpht.com%2Fcbk%3Fpanoid%3D1Y6-J_EubV2V98_XmOH_NA%26output%3Dthumbnail%26cb_client%3Dmaps_sv.tactile.gps%26thumb%3D2%26w%3D203%26h%3D100%26yaw%3D137.1953%26pitch%3D0%26thumbfov%3D100!7i16384!8i8192)).

13. On information and belief, HP uses the Austin Office as a regular and established place of business because this location is where numerous important employees work, including, but not limited to a Director of IT, a Director of Governmental Affairs, software and hardware engineers, and other engineers.

14. Additionally, HP's website lists fifty-one H-1B labor condition applications for persons employed in Austin Texas. *See* Exhibit 9 (<http://www.hp.com/hpinfo/>). Thus, the workers in Austin are highly specialized and important to the regular operation of HP because workers holding H-1B visa are employed in a specialty occupation that requires a "theoretical and practical application of a body of highly specialized knowledge . . . and attainment of a bachelor's or higher degree in the specific specialty. . . ." *See generally* 8 U.S.C. § 1184.

15. Moreover, HP lists several positions on its website for careers in Austin, Texas, including the exemplary one seen in the screenshot below:



See Exhibit 10 (<https://h30631.www3.hp.com/job/bengaluru/cyber-security-engineer/3544/8853709>).

16. On information and belief, HP owns real estate in the Austin, Texas region including properties at 7501 N. Capital of Texas Highway, TX 78731; 3301 Hibbets Rd, Austin, TX 78721; 14231 Tandem Blvd, Austin, TX 78728; and 14219 Tandem Blvd, Austin, TX 78728.

17. Additionally, HP operates the HP Partners First Program. *See generally*, Exhibit 11 (HP Partners First Program Brochure). The program is a partnership agreement between HP and retailers throughout the area that “is focused on being first in sales, speed and solutions, offering a comprehensive framework that encompasses a broad range of partner motions.” A portion of the program is detailed in the infographic below:



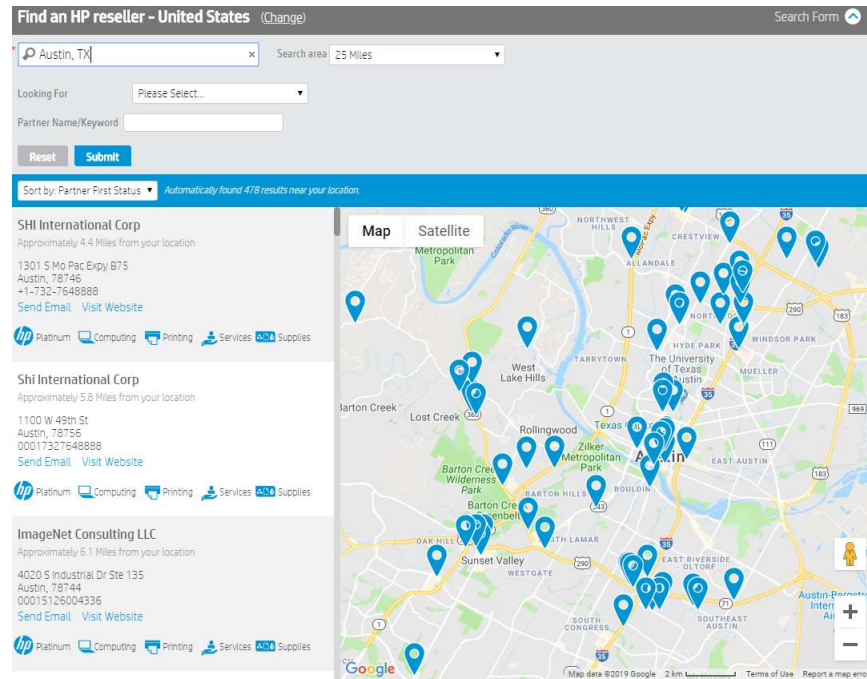
See Exhibit 11 at page 10.

18. The HP Partners First Program includes three tiers of partnership: Silver, Gold, and Platinum. At every level, the partners are required to enter into a formal Partner agreement with HP, and provide Sales Certified Printing, Computing and Supplies. *Id.* at 11. Additionally, HP provides market development funds to Platinum members. *Id.* at 15.

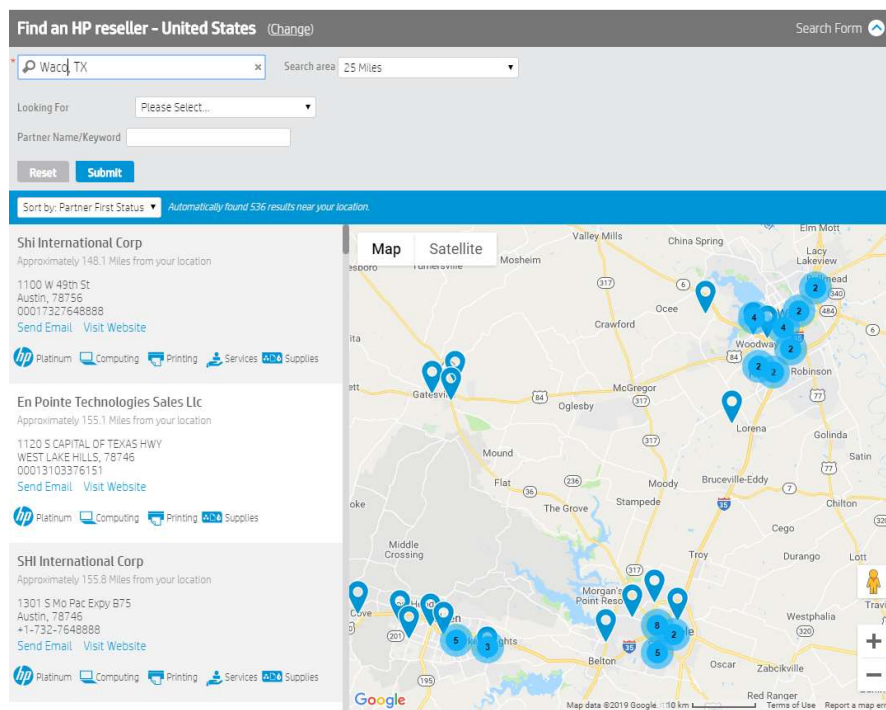
19. Moreover, “HP places great value in partnership with reseller partners contributing significantly towards HP’s business revenue. Visibility of partner’s business are critical component towards fine-tuning of collaborative sales effort.” *Id.* at 44.

20. Through this HP Partners First Program, HP has hundreds of partners physically located throughout this district, including but not limited to contracted HP partners in Waco, Austin, and San Antonio. Indeed, the HP website provides consumers with the ability to search for resellers based on cities or zip codes in this

district. Conducting a simple search on HP's website of Waco, Austin, and San Antonio yields the results seen in the screenshots on the following pages:

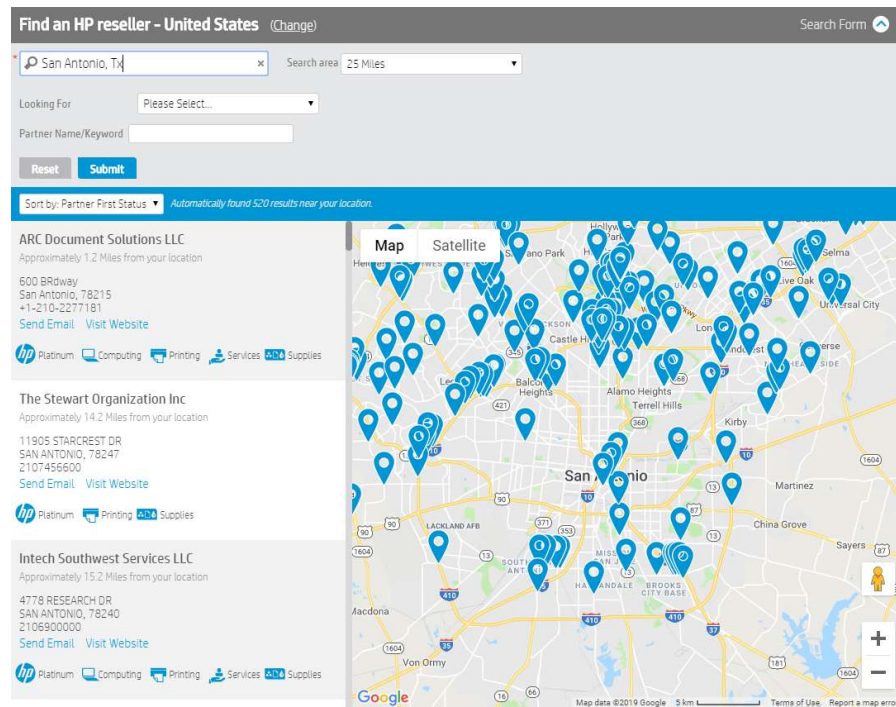


Austin, Texas



Waco, Texas





San Antonio, Texas

21. A search of the Austin, Texas area in this portal yields at least fifty-nine partners participating in the HP Partners First Program. Fifteen of those partners are platinum partners. All of the platinum partners offer HP Computing, Printing, Services, and Supplies to consumers in the Austin area.

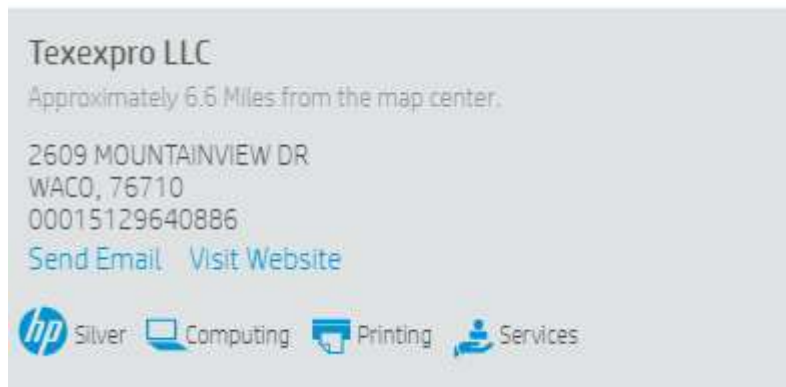
22. By way of example, ImageNet Consulting is listed as a Platinum Partner selling printing services, as seen in the screenshot below:





According to ImageNet Consulting's website, the company offers several printers for sale including the HP PageWide Pro MFP P57750 and HP PageWide Managed E55650dn. Both of which are infringing inkjet printers. *See* Exhibit 12 (<http://www.imagenetconsulting.com/products/copiers-printers-scanners/workteam-printers/>).

23. Likewise, a targeted search of the Waco, Texas area yields at least seven partners participating in the HP Partners First Program. All of those partners are Silver partners of the HP Partners First Program, and at least one of those silver members offers HP Computing, Printing, and Supplies to consumers in the Waco area. By way of further example, Texexpro LLC is listed as a Silver Partner Selling printing services, as seen in the screenshot below:

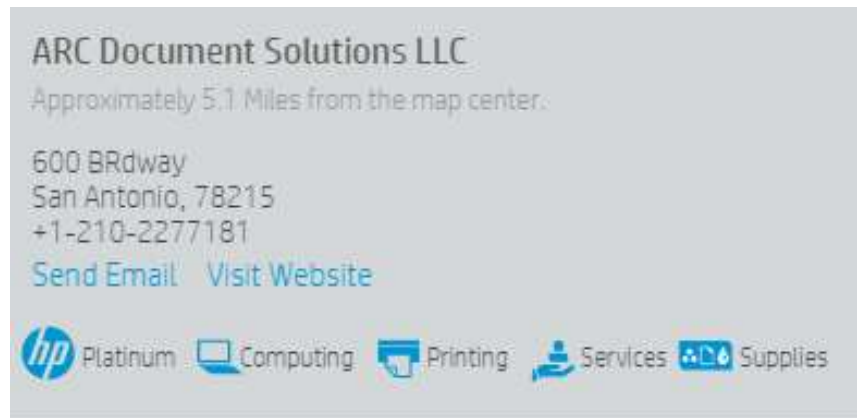


According to Texexpro LLC'S website, the company offers several printers for sale including the HP OfficeJet 4650, an infringing inkjet printer. *See* Exhibit 13 (<https://www.texexpro.com/copy-of-products>).

24. Additionally, a targeted search of the San Antonio, Texas area yields at least fifty-five partners participating in the HP Partners First Program. Seventeen of

those partners are platinum partners. All of the platinum partners offer HP Computing, Printing, Services, and Supplies to consumers in the San Antonio area.

25. By way of example, ARC Document Solutions LLC is listed as a Platinum Partner Selling printing services as seen in the screenshot below:



According to ARC Document Solutions LLC's website, the company offers several printers for sale including the HP PageWide Enterprise Color 556dn Color Printer, HP PageWide Pro 750dw Color Printer, and the HP PageWide Pro 452dw Color Printer, all of which are infringing inkjet printers. *See* Exhibit 14 (<http://shop.arcsupplies.com/store/c-527-ink-printers.aspx>).

26. Moreover, consumers in this district are able to purchase infringing thermal inkjet printers and cartridges directly from HP through its online website at <https://store.hp.com/us/en>. HP, directly and/or through its agents, advertises in this district, and through its website and other websites, offers to sell, sells and/or distributes its products in this district, and/or has induced the sale and use of its products in this district.

27. Accordingly, upon information and belief, HP, either directly or through its agents, distributes, markets, delivers and sells, among other products, infringing inkjet printers and inkjet cartridges within this judicial district through the HP Partners First Program; through many stores in Waco, Austin, and San Antonio and the surrounding area, such as Best Buy, S.P. Richards Co., Staples Inc., and Frys Electronics; and directly to consumers through its online store front at <https://store.hp.com/us/en>.

28. On information and belief, HP, through at least its website and its partners, has substantial sales of products, including infringing inkjet printers and cartridges, in this district, and an established and substantial business presence in this district. On information and belief, HP sells its products, including infringing inkjet printers and cartridges, online through the Internet for delivery in this district, and through stores located in this district.

29. On information and belief, HP derives substantial revenue from the sale of infringing inkjet printers and inkjet cartridges distributed to, and within this district.

30. On information and belief, HP has previously litigated at least one patent infringement case before this court without contesting jurisdiction and venue in *Iron Oak Technologies, LLC v. HP Inc.*, Case No. 17-cv-1068, W.D. Texas.

### **THE PATENTS-IN-SUIT**

#### **Lexmark International, Inc.**

31. The patents-in-suit arise from Lexmark International, Inc.'s ("Lexmark") many years of researching, designing and developing innovative and proprietary inkjet printer and inkjet cartridge technologies.

32. Lexmark formed in 1991 when IBM divested a number of its hardware manufacturing operations, including printer and printer supply operations. Since that time, Lexmark became a leading developer, manufacturer and supplier of printing solutions including thermal inkjet printers, and their associated supplies and services. Lexmark developed and owned most of the technology for its inkjet printers and associated supplies, and that differentiated Lexmark from a number of its major competitors.

33. Lexmark's research and development activity focused on, *inter alia*, inkjet printers and printer supplies. The process of developing new technology products is complex and requires innovative designs and engineering that anticipate customer needs and technological trends. Lexmark's research and development expenditures were \$375 million in 2009, \$423 million in 2008, \$401 million in 2007, \$371 million in 2006, \$336 million in 2005, \$312 million in 2004, \$266 million in 2003, \$247 million in 2002, \$246 million in 2001, \$217 million in 2000, and \$184 million in 1999.

34. Lexmark's intellectual property was one of its major assets and ownership of its innovative and proprietary inkjet printer and inkjet cartridge technology was important to its competitive position. As of April 2013, Lexmark held approximately 1,500 inkjet patents worldwide. Lexmark was recognized as an industry leader in inkjet printer and inkjet cartridge technology.

35. Upon information and belief, the current estimated industry-wide revenue for inkjet printer hardware and associated supplies exceeded \$20 billion in the United

States alone. On information and belief, HP's annual U.S. revenue in the inkjet printer hardware and associated supplies exceeded \$6 billion.

36. In its business strategy to transition from a hardware-centric company to an end-to-end solutions company, Lexmark entered into discussions for the sales of its hardware-based inkjet-related research and development assets.

37. Recognizing the incredible value of Lexmark's intellectual property, in 2013, Funai Electric Co., Ltd. ("Funai") acquired Lexmark's inkjet technology and assets, including the patents-in-suit for approximately \$100 million.

38. Funai assigned to Slingshot all substantial rights, title, and interest in the patents-in-suit.

#### **The Invention of the Patents-in-Suit**

39. Most of the early printers that could be used with personal computers were noisy impact printers, including dot-matrix and daisy-wheel printers. Both were introduced in the early 1970s. Dot-matrix printers worked by driving printhead pins into an ink-infused ribbon to get ink onto the page, and daisy-wheel printers worked by driving a wheel of pre-formed typewriter-like characters into the ribbon. But beginning in the mid-1980s, consumer inkjet and laser printers were introduced nearly simultaneously, and they eventually took over a large percentage of the printer market. Technology breakthroughs in drop-on-demand inkjet technology, however, made the devices viable for both home and small office use.

40. Further, as a result of continuing technology advances, and starting in the mid-1990s, inkjet printers caught-up with, and surpassed all other printer types, even

laser printers. And because of their lower cost, ever improving resolution and ability to print in vivid color, this was when color inkjet printers and cartridges became popular in the market.

41. Inkjet printers spray liquid ink onto paper in tiny, precise drops. The ink is held in replaceable or refillable cartridges, most of which include a printhead with an array consisting of hundreds or thousands of tiny nozzles arranged close together through which the ink droplets are sprayed. Some printers have built-in printheads that are separate from the ink cartridges. The cartridges also include microchips and other electronic components to control the ink spray, as well as ink containment systems such as foams, bladders, and springs. Inkjet printers use either thermal technology (e.g., tiny chambers where ink is heated) or piezoelectric crystals (which vibrate or change shape when charged) to propel tiny ink droplets onto a page to create the printed text or images. A printer arm moves the cartridges across the page as the images are drawn. Software algorithms interpret the computer image the user is trying to print to determine the color and position of the ink that makes it to the page.

42. Typically, the ink in an inkjet printer includes black plus three primary colors with which all the other printable colors are made through blending. The primary colors are cyan (blue), magenta (a reddish color) and yellow. Black ink is usually held in its own cartridge. For some printers, the primary colors are housed in a single cartridge, while for others, each color has its own separate cartridge.

43. As mentioned above, Lexmark entered the inkjet market after being spun-off from IBM in 1991. Highlights of its technological developments span over many



years. Lexmark announced its first inkjet printer, the IBM Color Jetprinter PS 4079, in 1992. In 1993, Lexmark introduced its first inkjet printer with an internally-developed engine (monochrome printing), the IBM ExecJet III 4076. In 1994, Lexmark announced its first internally developed inkjet color printer, the ExecJet IIc. In 1997, Lexmark announced the industry's first inkjet device capable of printing 1,200 x 1,200 dpi, the Lexmark 7000 Color Jetprinter. In 1998, Lexmark launched the industry's first 2-in-1 printer, the Lexmark 5770 Photo Jetprinter, allowing users to edit, print, and store digital photos without a PC. Lexmark continued to advance inkjet printer technology, and in 2007, announced that eight of its twelve new Lexmark inkjet printers had wireless capabilities spanning four-in-one and single-function printer categories.

44. As the patents-in-suit demonstrate, Lexmark's research and development efforts and investments were pioneering in the industry, covering all aspects of inkjet printer technology, including printers, printheads, heater chips, substrates, inkjet containment systems, and ink drop delivery.

**United States Patent No. 6,485,124**

45. On November 26, 2002, the USPTO duly and legally issued United States Patent No. 6,485,124 ("the '124 patent") entitled "Optical alignment method and detector" to inventors Dave G. King and Patrick L. Kroger. A true and correct copy of the '124 patent is attached as Exhibit 1.

46. The '124 patent is presumed valid under 35 U.S.C. § 282.

47. Slingshot owns all substantial rights, title, and interest in the '124 patent.

48. As set forth in the Abstract, the '124 patent is directed to, among other things,

An alignment detector that detects an alignment of a printhead of a printer, with the alignment detector including a photodetector and a single focusing element focusing a point on a media to a point on the photodetector. The alignment detector can be used to detect the alignment of the printer by scanning the alignment detector across the media and detecting predetermined marks previously printed on the media by imaging the predetermined marks using the alignment detector. The area between the single focusing element and the photodetector may be filled by a translucent material, such that there is no air gap between the two.

**United States Patent No. 6,666,449**

49. On December 23, 2003, the USPTO duly and legally issued United States Patent No. 6,666,449 ("the '449 patent") entitled "Star wheel surface enhancement and process of manufacture" to inventors Stephen F. DeFosse, Edward L. Kiely and Sean D. Smith. A true and correct copy of the '449 patent is attached as Exhibit 2.

50. The '449 patent is presumed valid under 35 U.S.C. § 282.

51. Slingshot owns all substantial rights, title, and interest in the '449 patent.

52. As set forth in the Abstract, the '449 patent is directed to, among other things,

A star wheel manufacturing process, and a star wheel manufactured thereby, suitable for an ink jet printer. Metal is formed by chemical milling, subtractive etching or the like, into the desired star wheel configuration, including a plurality of radially extending projections having tips. At least a portion of each tip has an electropolished surface. A coating of fluorinated polymer or the like may be applied to at least a portion of the electropolished surface on each tip.

**United States Patent No. 6,773,088**

53. On August 10, 2004, the USPTO duly and legally issued United States Patent No. 6,773,088 (“the ‘088 patent”) entitled “Double lipped printhead maintenance cap” to inventors Charles S. Aldrich, Marvin J. Jackson, Martin A. Johnson, and Herman A. Smith. A true and correct copy of the ‘088 patent is attached as Exhibit 3.

54. The ‘088 patent is presumed valid under 35 U.S.C. § 282.

55. Slingshot owns all substantial rights, title, and interest in the ‘088 patent.

56. As set forth in the Abstract, the ‘088 patent is directed to, among other things,

A printhead maintenance cap includes a base and a wall portion. The wall portion is defined by a plurality of adjoining walls, and has a proximal end and a distal end, the plurality of adjoining walls defining an interior region. The proximal end is coupled to the base. A first lip extends from the distal end of the wall portion by a first extent in a direction non-orthogonal to the base, the first lip defining a first perimetrical sealing surface. A second lip extends from the distal end of the wall portion by a second extent, the second lip being spaced apart from the first lip, the second lip defining a second perimetrical sealing surface.

**United States Patent No. 7,311,385**

57. On December 25, 2007, the USPTO duly and legally issued United States Patent No. 7,311,385 (“the ‘385 patent”) entitled “Micro-fluid ejecting device having embedded memory device” to inventors John G. Edelen, George K. Parish and Kristi M. Rowe. A true and correct copy of the ‘385 patent is attached as Exhibit 4.

58. The ‘385 patent is presumed valid under 35 U.S.C. § 282.

59. Slingshot owns all substantial rights, title, and interest in the ‘385 patent.

60. As set forth in the Abstract, the '385 patent is directed to, among other things,

A semiconductor substrate for a micro-fluid ejecting device. The semiconductor substrate includes a plurality of fluid ejection devices disposed on the substrate. A plurality of driver transistors are disposed on the substrate for driving the plurality of fluid ejection devices. A programmable memory matrix containing embedded programmable memory devices is operatively connected to the micro-fluid ejecting device for collecting and storing information on the semiconductor substrate for operation of the micro-fluid ejecting device. The programmable memory matrix provides a high density of memory bits embedded on the substrate for storing information about the micro-fluid ejecting device.

**United States Patent No. 7,819,498**

61. On October 26, 2010, the USPTO duly and legally issued United States Patent No. 7,819,498 ("the '498 patent") entitled "Methods and systems using printhead tank memory to determine printhead tank configuration" to inventor Jason T. McReynolds. A true and correct copy of the '498 patent is attached as Exhibit 5.

62. The '498 patent is presumed valid under 35 U.S.C. § 282.

63. Slingshot owns all substantial rights, title, and interest in the '498 patent.

64. As set forth in the Abstract, the '498 patent is directed to, among other things,

Methods and systems using printhead tank memory to determine printhead tank configuration are provided in accordance with embodiments of the invention. One example embodiment of the invention may include a printhead ink tank. The printhead ink tank may include a memory tag readable by a printer memory tag reader in communication with a printer controller. The memory tag may further include ink tank configuration instructions that include at least one of an ink tank configuration identifier or at least one ink tank location identifier. The ink tank configuration instructions can cause the printer controller to perform at least one memory operation associated with the memory tag.

**United States Patent No. 7,841,712**

65. On November 30, 2010, the USPTO duly and legally issued United States Patent No. 7,841,712 (“the ‘712 patent”) entitled “Automatic printhead and tank install positioning” to inventors Robert Muyskens and Gregory S. Woods. A true and correct copy of the ‘712 patent is attached as Exhibit 6.

66. The ‘712 patent is presumed valid under 35 U.S.C. § 282.

67. Slingshot owns all substantial rights, title, and interest in the ‘712 patent.

68. As set forth in the Abstract, the ‘712 patent is directed to, among other things,

A system and method for automatically determining the appropriate printhead/ink tank installation position to move a carrier transporting the printhead/ink tanks for a printing device is presented. The carrier transporting the printhead/ink tank moves along a carrier frame and is covered by a protective cover. Once the protective cover is raised on the printing device, the status of the ink tank is sensed. Based on the ink tank status, the printing device carrier is moved to the appropriate printhead/ink tank installation position. In one embodiment, the status of the ink tank is determined by using the ink presence sensor. In another embodiment, the status of the ink tank is determined by using near field wireless communication with the memory of the ink tank.

**United States Patent No. 8,113,618**

69. On February 14, 2012, the USPTO duly and legally issued United States Patent No. 8,113,618 (“the ‘618 patent”) entitled “Methods and systems using printhead tank memory to determine printhead tank configuration” to inventor Jason T. McReynolds. A true and correct copy of the ‘618 patent is attached as Exhibit 7.

70. The ‘618 patent is presumed valid under 35 U.S.C. § 282.

71. Slingshot owns all substantial rights, title, and interest in the ‘618 patent.

72. As set forth in the Abstract, the '618 patent is directed to, among other things,

Methods and systems using printhead tank memory to determine printhead tank configuration are provided in accordance with embodiments of the invention. One example embodiment of the invention may include a printhead ink tank. The printhead ink tank may include a memory tag readable by a printer memory tag reader in communication with a printer controller. The memory tag may further include ink tank configuration instructions that include at least one of an ink tank configuration identifier or at least one ink tank location identifier. The ink tank configuration instructions can cause the printer controller to perform at least one memory operation associated with the memory tag.

#### **HP's INFRINGEMENT OF THE PATENTS-IN-SUIT**

73. Defendant has made, used, sold, offered for sale, and continues to make, use, sell and offer to sell in the United States thermal inkjet printers and thermal inkjet cartridges that infringe the asserted patents.

74. HP's inkjet cartridges including at least, HP 60, HP 60XL, HP 61, HP 61XL, HP 62, HP 62XL, HP 63, HP 63 XL, HP 64, HP 64 XL, HP 65, HP 65XL, HP 97, HP 564, HP 564XL, HP 902, HP 902XL, HP 920XL, HP 931, HP 951, HP 971 HP 932, HP 933, HP 950, HP 950XL, HP 970, HP 970 XL, HP 971 XL, HP 972, and HP 980 (collectively, "Accused Inkjet Cartridges") infringe at least one claim of one or more of the asserted patents.

75. HP's inkjet printers including at least, Deskjet 1000, Deskjet 1010, Deskjet 1050, Deskjet 1051, Deskjet 1055, Deskjet 1056, Deskjet 1510, Deskjet 1512, Deskjet 2050, Deskjet 2510, Deskjet 2512, Deskjet 2514, Deskjet 2540, Deskjet 2541, Deskjet 2542, Deskjet 2543, Deskjet 2544, Deskjet 3000, Deskjet 3050, Deskjet 3050A, Deskjet 3051A, Deskjet 3052A, Deskjet 3054, Deskjet 3056A, Deskjet 3510, Deskjet 3511, Deskjet 3512,



Deskjet 3516, the HP DesignJet T120, HP DesignJet T130, the HP DesignJet T520, HP DesignJet T530, HP Photosmart C6250, HP Photosmart 6500, HP OfficeJet 2620, HP OfficeJet 4630, HP OfficeJet 4632, HP OfficeJet 6600/6700, HP Office Jet Pro 6978, HP OfficeJet Pro 7720, HP OfficeJet Pro 7730, HP OfficeJet Pro 7740, HP OfficeJet Pro 8600, HP OfficeJet Pro 8610e, HP OfficeJet Pro 8710, HP OfficeJet Pro 8720, HP OfficeJet Pro 8730, HP OfficeJet Pro 8740, HP OfficeJet Pro X, ENVY 4500 e-All-in-One, ENVY 4501, ENVY 4502, ENVY 4503 e-All-in-One, ENVY 4504 e-All-in-One, ENVY 4505, ENVY 5530 e-All-in-One, ENVY 5531 e-All-in-One, ENVY 5535 e-All-in-One, HP T120 and HP T520 (collectively, “Accused Inkjet Printers”), infringe at least one claim of one or more of the asserted patents.

76. Heater chips used in HP’s inkjet cartridges including at least, HP WBR and MZT Heater Chips (collectively, “Accused Heater Chips”), infringe at least one claim of the asserted patents.

77. The Accused Inkjet Cartridges, Accused Inkjet Printers and Accused Heater Chips are collectively “Accused Products.”

78. Further discovery may reveal additional infringing Accused Products.

79. Defendant’s acts of infringement have damaged Plaintiff. Plaintiff is entitled to recover from Defendant the damages Plaintiff incurred and is continuing to incur as a result of Defendant’s wrongful acts.

**ACTS GIVING RISE TO THIS ACTION**

**Count I – Infringement of United States Patent Number 6,485,124**

80. Slingshot repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs, as set forth above.

81. Defendant has infringed and continues to infringe in violation of 35 U.S.C. § 271(a) one or more claims of the '124 patent by making, using, selling, offering for sale, or importing into the United States products that infringe the '124 patent. The accused products that infringe one or more claims of the '124 patent include, but are not limited to, at least the HP OfficeJet Pro 7720, HP OfficeJet Pro 7730, HP OfficeJet Pro 7740.

82. Upon information and belief, each of the above-listed ink products have the same type of alignment sensors, which means the above-listed products infringe each and every element of at least claim 1 of the '124 patent literally or under the doctrine of equivalents. Further discovery may reveal additional infringing products and/or models.

83. For example, claim 1 of the '124 patent covers:

1. A printing apparatus, comprising:

a light source;

an alignment sensor, wherein said alignment sensor includes a detector and a single focusing element to image a point on a media to a point on the detector;  
and

a control unit to determine whether said printing apparatus is aligned based on a detection by the alignment sensor of a predetermined mark on the media.

84. For example, upon inspection, and information and belief, the HP Office Jet Pro 7740, seen in the images below, meets each and every limitation of claim 1 of the '124 patent enumerated above.



85. In particular, HP Office Jet Pro 7740 includes a printing apparatus (seen in the image on the right) that comprises a (1) a “light source;” (2) “an alignment sensor, wherein said alignment sensor includes a detector and a single focusing element to image a point on a media to a point on the detector;” and (3) “a control unit to determine whether said printing apparatus is aligned based on a detection by the alignment sensor of a predetermined mark on the media.” Accordingly, the HP Office Jet Pro 6978 infringes each and every element of claim 1 of the '124 patent literally or under the doctrine of equivalents.

86. Defendant’s infringement of the '124 patent has damaged Plaintiff, and Plaintiff is entitled to recover from HP the damages it has sustained as a result of Defendant’s wrongful acts including, but not limited to a reasonable royalty.

**Count II – Infringement of United States Patent Number 6,666,449**

87. Slingshot repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs, as set forth above.

88. Defendant has infringed and continues to infringe in violation of 35 U.S.C. § 271(a) one or more claims of the '449 patent by making, using, selling, offering for sale, or importing into the United States products that infringe the '449 patent. The accused products that infringe one or more claims of the '449 patent include, but are not limited to, at least the HP OfficeJet Pro 4630, HP OfficeJet 4632, HP OfficeJet 6600/6700, HP Office Jet Pro 6978, HP OfficeJet Pro 8600, and HP OfficeJet Pro 8610e

89. Upon information and belief, each of the above-listed ink products have the same type of electropolished star wheel, which means the above-listed products infringe each and every element of at least claim 1 of the '449 patent literally or under the doctrine of equivalents. Further discovery may reveal additional infringing products and/or models.

90. For example, claim 1 of the '449 patent covers:

1. A star wheel comprising:

a metallic body;

a plurality of radially extending projections from said body, each said projection having a tip on a distal end thereof; and

at least a portion of each of said projections having an electropolished surface.

91. For example, upon inspection, and information and belief, the HP Office Jet Pro 6978, seen in the images below, meets each and every limitation of claim 1 of the '449 patent enumerated above.



92. In particular, the HP Office Jet Pro 6978 has a star wheel (seen in the image on the right) that has (1) “a metallic body;” (2) “a plurality of radially extending projections from said body, each said projection having a tip on a distal end thereof;” and (3) “at least a portion of each of said projections having an electropolished surface.” Accordingly, the HP Office Jet Pro 6978 infringes each and every element of claim 1 of the ‘449 patent literally or under the doctrine of equivalents.

93. Defendant’s infringement of the ‘449 patent has damaged Plaintiff, and Plaintiff is entitled to recover from HP the damages it has sustained as a result of Defendant’s wrongful acts including, but not limited to a reasonable royalty.

### **Count III – Infringement of United States Patent Number 6,773,088**

94. Slingshot repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs, as set forth above.

95. Defendant has infringed and continues to infringe in violation of 35 U.S.C. § 271(a) one or more claims of the ‘088 patent by making, using, selling, offering for sale, or importing into the United States products that infringe the ‘088 patent. The accused products that infringe one or more claims of the ‘088 patent include, but are not limited to, at least the HP OfficeJet Pro 4630, HP OfficeJet 4632, and HP Office Jet Pro 6978.

96. Upon information and belief, each of the above-listed products have the same type of printer head maintenance cap, which means the above-listed products infringe each and every element of at least claim 1 of the '088 patent. Further discovery may reveal additional infringing products and/or models.

97. For example, and without limitation, the HP OfficeJet Pro 4630, HP OfficeJet 4632, and HP Office Jet Pro 6978 infringe each and every element of claim 1 of the '088 patent, literally or under the doctrine of equivalents.

98. For example, claim 1 of the '088 patent covers:

1. A printhead maintenance cap, comprising:

a base;

a wall portion defined by a plurality of adjoining walls, and having a proximal end and a distal end, said plurality of adjoining walls defining an interior region, said proximal end being coupled to said base; and

a first lip extending from said distal end of said wall portion by a first extent in a direction non-orthogonal to said base, said first lip defining a first perimetrical sealing surface; and

a second lip extending from said distal end of said wall portion by a second extent, said second lip being spaced apart from said first lip, said second lip defining a second perimetrical sealing surface

99. For example, upon inspection, and information and belief, the HP Office Jet Pro 6978, seen in the images below, meets each and every limitation of claim 1 of the '088 patent enumerated above.





100. In particular, the HP Office Jet Pro 6978 has a printhead maintenance cap (seen in the image on the right) that has (1) “a base;” (2) “a wall portion defined by a plurality of adjoining walls, and having a proximal end and a distal end, said plurality of adjoining walls defining an interior region, said proximal end being coupled to said base;” (3) a first lip extending from said distal end of said wall portion by a first extent in a direction non-orthogonal to said base, said first lip defining a first perimetrical sealing surface;” and (4) “a second lip extending from said distal end of said wall portion by a second extent, said second lip being spaced apart from said first lip, said second lip defining a second perimetrical sealing surface.” Accordingly, the HP Office Jet Pro 6978 infringes each and every element of claim 1 of the ‘088 patent literally or under the doctrine of equivalents.

101. Defendant’s infringement of the ‘088 patent has damaged Plaintiff, and Plaintiff is entitled to recover from HP the damages it has sustained as a result of Defendant’s wrongful acts including, but not limited to a reasonable royalty.

#### **Count IV - Infringement of United States Patent Number 7,311,385**

102. Slingshot repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs, as set forth above.

103. Defendant has infringed and continues to infringe in violation of 35 U.S.C. § 271(a) one or more claims of the '385 patent by making, using, selling, offering for sale, or importing into the United States products that infringe the '385 patent. The accused products that infringe one or more claims of the '385 patent include, but are not limited to, at least the HP OfficeJet Pro 4630, HP OfficeJet 4632, HP OfficeJet 6600/6700, HP Office Jet Pro 6978, HP OfficeJet Pro 8600, HP OfficeJet Pro 8610e, and HP Officejet Pro X.

104. Upon information and belief, each of the above-listed products have the same type of heater chip memory that is erasable by ultraviolet light, which means the above-listed products infringe each and every element of at least claim 1 of the '385 patent literally or under the doctrine of equivalents. Further discovery may reveal additional infringing products and/or models.

105. For example, claim 1 of the '385 patent covers:

1. A substrate for a micro-fluid ejecting device, the substrate comprising:
  - a plurality of fluid ejection devices;
  - a plurality of driver devices for driving the plurality of fluid ejection devices;
  - a nonvolatile programmable memory matrix containing embedded programmable memory devices, the matrix capable of being operatively connected to the micro-fluid ejecting device for storing information for operation of the micro-fluid ejecting device, wherein the memory matrix is erasable by ultraviolet light; and
  - a layer disposed adjacent the nonvolatile programmable memory matrix, said layer having properties sufficient to block ultraviolet light having a wavelength below about 400 nanometers.

106. For example, upon inspection, and information and belief, the HP Officejet Pro X, seen in the images below, meets each and every limitation of claim 1 of the '385 patent enumerated above.



107. In particular, the HP Office Jet Pro 6978 has a substrate for a micro-fluid ejecting device that has (1) “a plurality of fluid ejection devices;” (2) “a plurality of driver devices for driving the plurality of fluid ejection devices;” (3) “a nonvolatile programmable memory matrix containing embedded programmable memory devices, the matrix capable of being operatively connected to the micro-fluid ejecting device for storing information for operation of the micro-fluid ejecting device, wherein the memory matrix is erasable by ultraviolet light;” and (4) “a layer disposed adjacent the nonvolatile programmable memory matrix, said layer having properties sufficient to block ultraviolet light having a wavelength below about 400 nanometers.” Accordingly, the HP Office Jet Pro 6978 infringes each and every element of claim 1 of the '385 patent literally or under the doctrine of equivalents.

108. Defendant's infringement of the '385 patent has damaged Plaintiff, and Plaintiff is entitled to recover from HP the damages it has sustained as a result of Defendant's wrongful acts including, but not limited to a reasonable royalty.

**Count V – Infringement of United States Patent Number 7,819,498**

109. Slingshot repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs, as set forth above.

110. Defendant has infringed and continues to infringe in violation of 35 U.S.C. § 271(a) one or more claims of the '498 patent by making, using, selling, offering for sale, or importing into the United States products that infringe the '498 patent. The accused products that infringe one or more claims of the '498 patent include, but are not limited to, at least HP 364, HP 564, HP 902, HP 902XL, HP 920XL, HP 934, and HP 935 along with printers compatible with these ink cartridges.

111. Upon information and belief, each of the above-listed products have the same memory tag for an ink tank that provides configuration instructions to the printer, which means the above-listed products infringe each and every element of at least claim 1 of the '498 patent literally or under the doctrine of equivalents. Further discovery may reveal additional infringing products and/or models.

112. For example, claim 1 of the '498 patent covers:

An ink tank, comprising:

a reservoir for holding ink; and

a memory tag associated with the reservoir;

wherein data stored in the memory tag includes ink tank configuration instructions, the ink tank configuration instructions identifying a total number of

ink tanks that are installed in a printing system when the ink tank is included as one of the installed tanks.

113. For example, upon inspection, and information and belief, the HP 902 ink cartridge along with the compatible HP Office Jet Pro 6978, seen in the image below, meets each and every limitation of claim 1 of the '498 patent enumerated above.



114. In particular, the HP 902 ink cartridge along with the compatible HP Office Jet Pro 6978 has an “ink tank” that has (1) “a reservoir for holding ink;” (2) “a memory tag associated with the reservoir;” and (3) “wherein data stored in the memory tag includes ink tank configuration instructions, the ink tank configuration instructions identifying a total number of ink tanks that are installed in a printing system when the ink tank is included as one of the installed tanks.” Accordingly, the HP 902 ink cartridge along with the compatible HP Office Jet Pro 6978 infringe each and every element of claim 1 of the '498 patent literally or under the doctrine of equivalents.

115. Defendant's infringement of the '498 patent has damaged Plaintiff, and Plaintiff is entitled to recover from HP the damages it has sustained as a result of Defendant's wrongful acts including, but not limited to a reasonable royalty.

**Count VI - Infringement of United States Patent Number 7,841,712**

116. Slingshot repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs, as set forth above.

117. Defendant has infringed and continues to infringe in violation of 35 U.S.C. § 271(a) one or more claims of the '712 patent by making, using, selling, offering for sale, or importing into the United States products that infringe the '712 patent including, but not limited to, inkjet cartridges. The accused products that infringe one or more claims of the '712 patent include, but are not limited to, at least the HP DesignJet T120, HP DesignJet T130, the HP DesignJet T520, and HP DesignJet T530.

118. Upon information and belief, each of the above-listed products have the same two-position stop architecture for replacing ink tank or printheads, which means the above-listed products infringe each and every element of at least claim 9 of the '712 patent literally or under the . Further discovery may reveal additional infringing products and/or models.

119. For example, and without limitation, the HP DesignJet T120, HP DesignJet T130, the HP DesignJet T520, and HP DesignJet T530 infringe each and every element of claim 9 of the '712 patent literally or under the doctrine of equivalents.

120. For example, claim 9 of the '712 patent covers:

9. A printing device comprising:

a carrier for transporting at least one semi-permanent printhead and at least one ink tank, wherein the carrier moves along a carrier frame and during printhead and ink tank replacement or installation is configured to stop at either a first or second of two different positions along the carrier frame;



a first sensor for determining a status of the at least one ink tank;  
a second sensor for determining a presence or not of the printhead; and  
a processor for determining an appropriate installation position from the two different positions for said replacement or installation of the at least one printhead or the at least one ink tank to move the carrier along the carrier frame based on the status of the at least one ink tank and the presence of the printhead.

121. For example, upon inspection, and information and belief, the HP DesignJet T530, seen in the images below, meets each and every limitation of claim 9 of the '712 patent enumerated above.



122. In particular, the HP DesignJet T530 is a printing device comprising (1) “a carrier for transporting at least one semi-permanent printhead and at least one ink tank, wherein the carrier moves along a carrier frame and during printhead and ink tank replacement or installation is configured to stop at either a first or second of two different positions along the carrier frame;” (2) “a first sensor for determining a status of the at least one ink tank;” (3) a second sensor for determining a presence or not of the printhead;” and (4) “a processor for determining an appropriate installation position from the two different positions for said replacement or installation of the at least one printhead or the at least one ink tank to move the carrier along the carrier frame based

on the status of the at least one ink tank and the presence of the printhead.”

Accordingly, the HP Office Jet Pro 6978 infringes each and every element of claim 9 of the '712 patent literally or under the doctrine of equivalents.

123. Defendant's infringement of the '712 patent has damaged Plaintiff, and Plaintiff is entitled to recover from HP the damages it has sustained as a result of Defendant's wrongful acts including, but not limited to a reasonable royalty.

**Count VII- Infringement of United States Patent Number 8,113,618**

124. Slingshot repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs, as set forth above.

125. Defendant has infringed and continues to infringe in violation of 35 U.S.C. § 271(a) one or more claims of the '618 patent by making, using, selling, offering for sale, or importing into the United States products that infringe the '618 patent. The accused products that infringe one or more claims of the '618 patent include, but are not limited to, at least HP 364, HP 564, HP 902, HP 902XL, HP 920XL, HP 934, and HP 935 cartridges.

126. Upon information and belief, each of the above-listed products have the same memory tag for an ink tank that includes configuration instructions, which means the above-listed products infringe each and every element of at least claim 1 of the '618 patent literally or under the doctrine of equivalents. Further discovery may reveal additional infringing products and/or models.

127. For example, claim 1 of the '618 patent covers:

1. An ink tank, comprising: a housing for holding ink; and a memory tag associated with the housing; wherein data stored in the memory tag includes ink tank configuration instructions, the ink tank configuration instructions identifying a total number of ink wells that are anticipated for installation in a printing system when the ink tank is included as one of the installation tanks.

128. For example, upon inspection, and information and belief, the HP 902 ink cartridge along with the compatible HP Office Jet Pro 6978, seen in the image below, meets each and every limitation of claim 1 of the '618 patent enumerated above.



129. In particular, the HP 902 ink cartridge along with the compatible HP Office Jet Pro 6978, has an “ink tank” that has (1) “housing for holding ink;” (2) “a memory tag associated with the housing;” and (3) “data stored in the memory tag includes ink tank configuration instructions, the ink tank configuration instructions identifying a total number of ink wells that are anticipated for installation in a printing system when the ink tank is included as one of the installation tanks.” Accordingly, the HP 902 ink cartridge along with the compatible HP Office Jet Pro 6978 infringe each and every element of claim 1 of the '618 patent literally or under the doctrine of equivalents.

130. Defendant's infringement of the '618 patent has damaged Plaintiff, and Plaintiff is entitled to recover from HP the damages it has sustained as a result of Defendant's wrongful acts including, but not limited to a reasonable royalty.

### **PRAYER FOR RELIEF**

Plaintiff respectfully requests this Court to enter the following legal and equitable relief in favor of Plaintiff and against Defendant as a result of Defendant's infringing conduct:

- a. A judgment that Defendant has directly infringed, either literally or under the doctrine of equivalents, one or more claims of the asserted patents;
- b. A judgment that awards Plaintiff all appropriate damages under 35 U.S.C. § 284 for Defendant's past infringement, and any continuing or future infringement of the asserted patents, including pre or post judgment interest, costs, and disbursements as justified under 35 U.S.C. § 284.
- c. Declare this case exceptional and award Slingshot its reasonable attorneys' fees as the prevailing party as provided by 35 U.S.C. § 285.
- d. Such other and further relief as the Court deems just and proper.

### **Jury Demand**

Plaintiff, pursuant to Federal Rule of Civil Procedure 38(b), demands a trial by jury.

Dated: June 11, 2019

Respectfully submitted,

/s/Raymond W. Mort, III

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